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AUTHOR	Wolf-Schein, Enid G.; Schein, Jerome D.
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ABSTRACT

This paper addresses the special problems in assessment of pupils who are congenitally or prelingually deafblind and who may have other disabilities, and argues that nonintrusive instruments and procedures are the assessment tools of choice. It contends that not enough attention has been given to developing, validating, and applying assessment procedures that meet the specialized needs of individuals whose major problem is not lack of inherent ability but a lack of opportunity to experience the world through the distance receptors of sound and/or sight, and that the use of inappropriate tests has led to placing children with deaf-blindness in unsuitable settings and cutting them off from learning what they must know for successful adaptation. The paper presents a fictitious case study to introduce nonintrusive assessment and BASIC (Behavioral Assessment Schedules for Individual Children), a nonintrusive assessment instrument. BASIC does not directly involve the pupil in a specific, structured task presented in a formal manner, but rather uses behavior observations. Ways in which nonintrusive assessments differ from currently applied standardized assessment tools are discussed, and nonintrusive measures that successfully assess persons who are deaf-blind are described. (CR)

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THE CASE FOR NONINTRUSIVE ASSESSMENT OF CHILDREN WHO ARE DEAFBLIND

PRESENTATION AT CANADIAN CONFERENCE ON DEAFBLINDNESS MISSISSAUGA, ONTARIO AUGUST 15, 1998

ENID G. WOLF-SCHEIN
&
JEROME D. SCHEIN

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THE CASE FOR NONINTRUSIVE ASSESSMENT OF CHILDREN WHO ARE DEAFBLIND

Presentation at Canadian Conference on Deafblindness
Mississauga, Ontario, August 15, 1998

Enid G. Wolf-Schein, University of Alberta

Jerome D. Schein, New York University & University of Alberta

Introduction

This presentation addresses the special problems in assessment of pupils who are congenitally or prelingually deafblind and who may have other disabilities as well, and will indicate why nonintrusive instruments and procedures are the assessment tools of choice. Our contention is that not enough attention has been given to developing, validating, and applying assessment procedures that meet the specialized needs of individuals whose major problem is not lack of inherent ability but a lack of opportunity to experience the world through the distance receptors of sound and or sight. As a result, there has been a history of labeling many such children as "untestable" and incapable of learning. Use of inappropriate tests has led to placing deafblind children in unsuitable settings, cut off from learning what they must know for successful adaptation.

Assessment of deafblind children may be difficult, but ways to surmount these difficulties are available. We propose to:

- review the area of nonintrusive testing
- differentiate it from currently applied standardized assessment tools
- describe some measures that successfully assess persons who are deafblind.

In the words of a popular folksong, "The times they are a-changing." Applied to psychometrics, those words fit well. Applied to assessment of deafblind and other persons who differ markedly from normal parameters, the word to be emphasized in that refrain is "a-changing." Yes, psychologists, educators, and others who evaluate deafblind individuals are beginning to change their approaches, but they have not altered them sufficiently. What is needed are radical shifts: first in theory and then in practice.

A Case History

Let me illustrate with a fictional case report—fictional, but based on numerous living examples. I chose to use a composite, because it is my professional responsibility never to violate the confidentiality of any client.

John was a five-year-old deafblind boy, referred by his pediatrician in light of "increasingly difficult behaviors" reported by the parents and the staff at the

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pre-school he attended. During a 90 minute observation, his mother remained with him at all times. She was alone with him in a large play area for about 10 minutes, in a classroom where several adults interacted with him personally for about one hour, and in the playground where other children were present for about 20 minutes. The following briefly summarizes observations made by the evaluator, who at no time interacted with John.

Communication

Primarily, John was passive, allowing himself to be manipulated no matter what the activity. Attending was brief and intermittent. He often touched his mother as if to verify she was there.

Motivation

John completed tasks only with much physical prompting. When he let a block drop into a box, he seemed more interested in the sensory impact, and he tapped and rubbed items given to him without examining them in any other manner. When not closely supervised he did not explore in any way.

Audition

There was no indication sound had any meaning for John. He has been diagnosed as having a severe sensorineural hearing loss. He has a history of otitis media.

Vocal Expression

John makes humming, nasal sounds like [m,n]. He was only heard to make a few vowel sounds, but they were distinct [ee], albeit not meaningful in relation to activities and objects. He had no special vocalization pattern and no expressive vocalizations or speech beyond what would be expected from a 9-to-12-month-old infant.

Vision

John stared at the sun and other bright light for a long time until distracted. He showed poor awareness of space, bumping into people and things. He did not reach out for objects. Visual acuity seems to be limited to differentiating between darkness and light and distinguishing large objects.

Motor Skills

John's gait was unsteady, his coordination poor. He showed very little purposeful gross-motor movement. He appeared unaware of kinesphere or objects in space. He had many random, repetitive movements. At times he displayed a lot of bodily tension and a weak grasp, when he did attempt to grasp an object at all. His movements were simple, like clapping.

Self-Care Skills

John seemed unaware of social requirements. He did not seem to mind juice on his face and shirt or crumbs from crackers over his lap. He put his arm in a puddle on the table without seeming to notice he was getting wet. He did allow a teacher to feed him and wipe his face during lunch.

Expressive/Receptive Gestures and Signs

None of John's movements seemed purposeful or directed toward anyone. When his hands were placed on his teachers while she made some signs he quickly dropped them.

Summary

John's BASIC profile is not a positive one. It should be noted that his mother did not feel John was as happy and lively during the observation period as he usually is. She also reported he is taking phenobarbital (dosage unknown). However, she did think that his actual level of interaction and communication with people were fairly typical.

Now what can we make of all these data? First of all, few psychometrics capture such a broad picture. Notice that there is no reference to a single "score" to represent John. Second, no reference is made to any norm group. Third, all of the behaviors described are relevant to John and the problems of intervening on his behalf. There is more, but those points suffice to introduce nonintrusive assessment and to a particular nonintrusive instrument, *BASIC- Behavioral Assessment Schedules for individual Clients*, that embodies principles that have been derived over more than three decades of working with persons whose backgrounds and personal characteristics differ so from the general population that they challenge most psychometrics at both theoretical and applied levels. Using BASIC as a guide, these observations can be formulated into developmental hierarchies and meaningful profiles. Also, a grid which allows you to see how distributions of behaviors over level and areas relate to one another.

Developmental and Psychometric Theory

The first psychometric notion that must be overturned is that of *fixed* human capacities. There is support for the belief that behaviors can be altered at any time. Trite as that may sound, it is fundamental to education. The corollary that may not appear obvious is that an individual's capacities are also variable.

The notion of *variable capacity* is at odds with the model psychologists borrowed from physics: *what is being measured is fixed* . Individuals have been conceived to have capacities, like milk bottles, that have been predetermined and that are inflexible, expecially at the upper end. Capacities can decline, shrink, deteriorate, but they cannot

expand. Experiences dictate how much milk the bottle contains, but a pint bottle can only hold a pint, not a quart. Do we need to make such an assumption? We think not.

The typical psychometric requires that the persons being examined cooperate, at least to the extent of following directions. The examiner determines the behavioral parameters. If behaviors occur outside those that are chosen, they are ignored or used to re-interpret the scores, but are not, in and of themselves, given diagnostic weight.

Interpretation is norm-based. In order to understand a person's response to the contrived situation, reference is made to how other people have responded. These "other people" are selected to represent a segment of the population to which the assessed individual is presumed to be a member.

The amount of time assigned to an assessment is usually brief. The areas covered are quite distant from intervention, and many important areas are overlooked altogether.

In summary, the psychometric developer: (a) chooses tasks to identify some trait, (b) administers them under standardized conditions, (c) compares an individual's performance on the tasks to those of a reference group, and (d) assigns a number or label to the individual's result reflecting his standing relative to the reference group.

In contrast to that approach, a nonintrusive instrument observes the individual in his customary setting, doing things he usually does, and distributes the observations over a frame of reference that is independent of any preconceived notion. The results are meaningful to the individual wowrking with the child and can be used as baseline measures as well as points of departure in education.

Purpose of Assessment

It is, first of all, important to keep in mind the purpose of testing. As we see it, the most important goal is to properly describe current behavior of importance to a particular child in order to implement a program that can modify that behavior and improve the status of the child educationally, socially, and emotionally. If a test has the opposite effect then the result is harm, not help for the child.

Some states and provinces require that all children be given standardized tests that do not reflect the competence of children who deviate, even slightly, from the norm. Take the case of a young lady we call Linda.

> Linda was born during the rubella epidemic of 1964. She was diagnosed as deafblind before she was two years old. At age five, her parents sought to enroll her in a public program, a program that required all entering children to be administered an individual intelligence test. The examiner noted her failure to respond to any items on the Stanford-Binet and declared, therefore, that she was profoundly mentally retarded. Fast forward to Linda's placement

at age eight in a then-new program designed for deafblind children. Her progress was remarkable for a "profoundly retarded" pupil. She eventually passed the coursework for a high-school diploma.

We recognize that good teachers make judgments based on a pupil's performance and not on test scores alone. Good teachers allow pupils as much opportunity for development as possible. Unfortunately, when children are improperly placed within the educational system due to mistaken assessments, teachers often cannot overcome such errors.

Approaches to Assessment

There are two basic approaches to assessment. One is the formal, standardized test which sets tasks for the individual that must be done in a specified way, in a specified time, based on a request by an individual, usually a psychologist, intervening with the individual for this purpose only. The purpose of these "tests" is to measure maximum performance on specific skills. To do well, the pupil should be cooperative and have good verbal ability. Conditions of a standardized test are difficult to meet when the physical and/or emotional characteristics of children preclude their having the same experiences as their peers. Among deafblind children specific sensory impairments or processing disorders restrict or alter the ways in which messages from others are received and responses expressed. The children also lack the experiences that other children have had to interact with the environment as well as the opportunities for incidental learning available to children who are alert to, interested in, and able to absorb environmental stimuli. Some of the differences in experiences directly result from the presence of severe impairments, others relate to the educational interventions to which they are exposed. These are often so inadequate they contribute to the disability, rather than help to alleviate the pupil's lack of exposure to stimuli.

A second approach is designated as nonintrusive assessment.

What is nonintrusive assessment?

Nonintrusive assessment, is that which does not directly involve the pupil in a specific, structured task presented in a formal manner. It includes (a) interviews, (b) use of questionnaires with knowledgeable caregivers, and (c) behavioral observations. Information derived from any of these can be used to complete developmental scales or adaptive behavior schedules, or write anecdotal reports which describe current functioning on various skills or behaviors.

Interviews or questionnaires. Interviews or questionnaires completed by staff and family who know the pupil well provide valuable information often not available to an examiner. However it is also advised that examiners not rely entirely on material

obtained from primary caregivers but supplement them by prior or subsequent observations to correct any positive or negative halo effects.

Nonintrusive observation. Nonintrusive observations do not require direct contact between the examiner, who will be making objective judgments about the pupil, and the pupil, thus eliminating the need for the pupil to cooperate with an unfamiliar person presenting a novel situation. Preferably, observations should focus on behaviors occurring in the pupil's accustomed environment with the pupil following her/his usual routine, at his or her usual pace, with family, program staff, or peers. Familiar caregivers also know what type of a reward will encourage their pupil and can anticipate when the pupil is beginning to get tired or agitated. If the pupil has a problem or needs inspiration it is addressed in a fashion that has a higher probability of allowing the pupil success. As a result, no pupil should be labeled as 'untestable' and assessment.

Results of nonintrusive testing

What nonintrusive assessment tools do best is allow you to get an objective picture of what a pupil does, preferably in a situation where they are comfortable and familiar. They take into account the interests, motivation and initiative of the pupil. If the pupil is not interested, does not care if he/she does well and has no interest in even beginning a task, then that is what we must describe because it reflects the current behavior of the pupil. It does not tell us what their level of competency is, only what their performance is at the moment.

Some examples - an overview

Assessment instruments to be used as examples of products meeting the requirements listed above are:

AIM *Assessment Intervention Matrix*

BASIC *Behavioral Assessment Schedules for Individual Clients*

BRIAAC *Behavior Rating Instrument for Autistic and Other Atypical Children*

ADLO *Assessment of Developmental Levels by Observation*

These instruments meet the important criteria of having baselines that can describe any individual. Floors, or baselines, in most standardized tests require some amount of ability. For example, the pupil may need to put a pellet in a bottle or a ring on a stick. If they do not "pass" they do not get credit for whatever it is they do! So they may take a test several times, getting closer and closer to doing the item but each time they still will "not pass." The materials to be discussed below take into account whatever it is the pupil does. Even if what they do is sit still and not participate at all! Thus, when they partially cooperate they will get credit for having moved forward. This is much more conducive to a teacher's mental health as well as allowing any progress to been seen.

AIM, BASIC, BRIAAC AND ADLO, can be used with clients who have idiosyncratic behaviors, who do not respond to unfamiliar persons or things and whose motivation is poor or nonexistent.

Assessment Intervention Matrix (AIM)

AIM was developed specifically to ascertain the level of self-care skills for deafblind children in the areas of Drinking, Eating, Dressing, Toileting, Personal Care, Housekeeping and Food Preparation. Each area has a sequence of approximately 20 skills beginning at a very early level to take into account and program for children who are very low functioning, as well as others who are able to learn high level skills given appropriate methods including task analysis. .

An advantage of this tool is that it is completed by caregivers who know the pupil well and each item is described in terms of the pupil's level of ability. For each item listed there is a corresponding goal so assessment leads immediately to intervention. Each goal sheet includes short term objectives and specific activities for achieving them. AIM is geared not only toward the development of the skill but the teaching of the necessary language in the naturalistic environment.

Behavioral Observation Schedules -BASIC and BRIAAC

As part of a total evaluation there is a need for an assessment of the pupil's relationships to adults and peers, motivation, ability to communicate in general, including using expressive and receptive speech-language (either spoken or signed), since the manner in which subsequent assessment and programming takes place is dependent upon level of ability in these areas.

Behavioral Assessment Schedules for Individual Clients (BASIC)

BASIC has grown out of years of research and experience with markedly atypical persons. Historically, BASIC is a close relative of the *Behavior Rating Instrument for Autistic and Other Atypical Children* (BRIAAC) (Ruttenberg, Wolf-Schein & Wenar, 1991). BRIAAC was developed to assess autistic pupils who were difficult to assess using standard psychometrics because of their bizarre behavior, inability to concentrate, echolalia, and inability or unwillingness to cooperate. Since the examiner did not interact with the pupil, the behavior could be assessed without interfering with any normal routine. Observed over a period of time, the behavior could be rated on a pre-existing framework that enabled the examiner to summarize the observations in a manner that would be readily communicated to other professionals and that would provide the basis for determining progress or the lack of it.

BASIC shares these characteristics, differing from BRIAAC in the aspects of behavior that it assesses and in procedural details.

BASIC meets the important criteria of having baselines that can describe any individual. Floors, or baselines, in most standardized tests require some amount of ability. For example, the pupil may need to put a pellet in a bottle or a ring on a stick. If they do not "pass" they do not get credit for whatever it is they do! BASIC take into account whatever it is the pupil does. Even if what they do is sit still and not participate at all! Thus, when they partially cooperate they will get credit for having moved forward.

BASIC does not assume that the persons being assessed have had access to schooling and other experiences typical for persons of their ages. It does not matter if pupils have idiosyncratic behaviors, do not respond to unfamiliar persons or things, have poor or nonexistent motivation, or no intelligible language.

Behaviors Assessed. BASIC taps behaviors directly relevant to pupil management. These behaviors are ranged across nine behavioral domains that provide the framework for the examiner's observations. Seven schedules — Communication, Motivation, Audition, Vocal Expression, Vision, Motor Competence, and Self-Care — apply to all pupils. The remaining two schedules — Expressive and Receptive Gestures & Signs — are intended only for settings in which manual communication is routinely used and are particularly useful for deafblind pupils.

Behavioral Range. BASIC strives to assess behavior at the most primitive developmental stages — to establish 'behavioral zeroes.' It divides the succeeding developmental stages into relatively small steps that enable BASIC to detect changes from virtually doing nothing appropriate, through incipient progress, up to four-year levels. BASIC is sensitive to both behavioral progressions and regressions.

Each schedule is arranged in a developmental progression, based on observations of many individuals of varying ages over a number of years. It is expected that not everyone goes through each level as they change behaviorally, but all such behaviors are included for the benefit of those who characteristically, at some point in time, do show them.

Administration. Because the BASIC examiner does not interact with the pupil in the measurement process, the examiner does not have to initiate assessment by 'establishing rapport'. The fact that the examiner does not interact with the pupil and that BASIC imposes no tasks on pupils outside their daily routine means that it can be repeated as often as desired. This feature is especially important to tracking behavioral responses to treatment.

The most important aspect of a BASIC assessment is that the examiner will rate what they see, not what they infer. Unlike a standardized test, the examiner is interested in whatever the pupils may do naturally, not how they respond to artificial tasks.

presented in a rigid fashion, with a specific behavior being assessed. Rather, as noted above, BASIC assesses the client's behavior in response to familiar persons and, preferably, in familiar surroundings.

Observation Time and Setting. Prior to the assessment the examiner should meet with the caregivers to obtain information about the pupil's schedule in order to plan the observation. At least one hour for direct observation is suggested, with a longer period being preferable. The time should be divided among a variety of routine activities, including independent living skills (eating, dressing, self-care), and performing new and familiar tasks of a recreational, therapeutic or academic nature. However, it is unnecessary to assign specific amounts of time to each schedule.

During an observation period a single behavioral sequence can yield information applicable to more than one schedule; e.g., during a lunch period the pupil may exhibit behaviors pertinent to self-care, communication, audition, vision, vocal expression, and motor competence. All these behaviors would be coded on the appropriate schedules.

Pupils should be observed with peers and familiar adults in both structured and free-time activities. It may be necessary to have some observations in the morning and some in the afternoon, in order to provide a wide scope of activities. Observations should take place over a one-day period.

Analysis. There are two methods for codifying observations; checklist and profile. The checklist is completed by ticking all levels that apply; the profile by distributing 10 points among levels observed and developing a profile which can be represented on individual recording grids.

When all schedules have been coded, profiles depict pupil's relative development — relative to their own development rather than to an exterior criterion. Such "Ipsative" measures are appropriate, since they show relative progress and regression among a pupil's behaviors. An ipsative average indicates a pupil's position on one variable relative to other variables. Thus, a pupil's average on any one BASIC or BRIAAC schedule can be immediately compared to that on the other schedules, portraying relative development *within* the pupil and *across* the various behavioral domains. The correlation of changes in one behavioral domain can also be readily noted in successive observations.

Assessment of Developmental Levels by Observation (ADLO)

ADLO is an instrument that can be administered in a short and specific period of time (a) as a checklist or interview with caregivers, based on their knowledge of the pupil, or (b) as an observational tool. ADLO provides a means of determining a level of functioning in the areas of Relationship to Adults, Expressive Language, Receptive Language, Fine Motor Skills, Gross Motor Skills, and Self-Help Skills. ADLO is not as

nonintrusive as BASIC, which relies on observations in a natural environment, in that a more specific set of tasks in a semistructured environment is suggested. Pupils are observed for 30-minutes the majority of which is with a caregiver who knows the pupil best, who will initially allow the pupil to explore independently, and later requests that they work or play with a variety of things. Caregivers are counseled to interact in their normal manner; it does not matter how they get their pupil/pupil involved. They are given a list of suggested activities and a variety of materials and told that the object is to engage in a variety of tasks involving, imitation, gross motor, exploratory, interactive verbal and performance activities. As a final part of the observation, a professional examiner will replace the familiar caregiver and try to elicit additional skills and behaviors, including how the pupil adapts to strangers. The entire situation is videotaped and behaviors applied to a series of checklists from which an Approximate Developmental Age is determined.

Summary

Assessment is only useful insofar as it contributes to the positive development of the pupil. With children who are deafblind individualized curriculum development based on findings from appropriate assessment is crucial.

Once the pupil is assessed the information produced must be relevant for planning and tracking ongoing progress. Findings must be presented in a manner that will be useful to persons working with the pupil.

It is important that individuals working with children who are severely disabled are given tools than enable them to address the relevant features of the pupil's behavior without trying to fit the behaviors into a preexisting assessment tool that was not developed for, or related to, the behavior of someone with very special problems, or reduce all of their very complex attributes into a single number.

What is most important is to address an individuals' needs, not to try to compare them to someone else's standard and decide that they are less able. In fact, looked at from a different perspective, children can be shown to have their own unique abilities and patterns of growth. Appropriate assessment procedures and materials will make it obvious that no pupil is "untestable."

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For additional information contact:

Dr. Enid G. Wolf-Schein, Suite J-2, 1703 Andros Isle, Coconut Creek, Florida 33066

Telephone/TDD: 954-978-1368. FAX: 954-978-1368. E-mail: scheinej@aol.com.